Bossier Parish Community College
Master Syllabus

Course Prefix and Number: Math 102 **Credit Hours:** 3

Course Title: College Algebra

Course Prerequisites: ACT score of 20 or higher, math placement test score, or a grade of "C" or higher in Math 099.

Textbooks: Blitzer, Robert. College Algebra, 5th edition. Pearson, 2010.
Trigsted, Kirk. College Algebra. Pearson, 2010. (online or computer-based classes)

Course Description: Topics from algebra including complex numbers; radical and rational equations; linear and quadratic equations and inequalities, absolute value equations and inequalities; lines and slope; graphs; inverse, exponential, and logarithmic functions; systems of equations and inequalities; conics; applications.

Learning Outcomes:

At the end of this course, the student will

A. solve equations and inequalities;
B. compute the slope of a line, write equations of lines, and graph equations of lines;
C. perform operations on functions;
D. graph a quadratic function;
E. perform operations on exponential and logarithmic functions and equations;
F. solve systems of equations and inequalities;
G. graph the conics.

To achieve the learning outcomes, the student will
(The letter designations at the end of each statement refer to the learning outcome(s).)

1. solve linear equations in one variable; (A)
2. solve application problems;(A)
3. solve quadratic equations; (A)
4. solve radical equations; (A)
5. solve linear inequalities; (A)
6. compute the slope of a line; (B)
7. write equations of lines; (B)
8. find domain and range of a function; (C)
9. graph functions; (C)
10. form composite functions; (C)
11. find the inverse of a function; (C)
12. recognize and graph parabolas; (D)
13. evaluate and graph exponential functions; (E)
14. evaluate logarithms; (E)
15. graph logarithmic functions; (E)

16. use the properties of logarithms; (E)
17. solve exponential and logarithmic equations; (E)
18. model exponential growth and decay; (E)
19. solve a linear system of equations; (F)
20. solve a nonlinear system of equations; (F)
21. solve a linear inequality; (F)
22. graph the ellipse, hyperbola, and parabola. (G)

Course Requirements: Take a comprehensive final examination.

Course Grading Scale:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Reviewed by: ***Frank Viviano*** ***and date: July 9, 2009***